

FIGURE 1: Alignment of Delta-4 16:0 Desaturases From English Ivy (SEQ ID NO:2) and Coriander (gi 417819)

|          |                                  |
|----------|----------------------------------|
| SEQ ID 2 | MALKLN-----FQCKKNHPAAFAKSP       |
| 417819   | LVTRVSSPRVFMASVNSMSVLDNLKSP      |
|          | PNLQVTHSMPPQKLEIFKSLDDWARNNV     |
|          | LIHLKSV                          |
|          | MAMKLNALMTLQCPKRN--MFTRIAPQA     |
|          | GRVRSKVSMASTLHASPLVFDKLGAGR      |
|          | -----PEVDELFNSLEGWARDNILLVHLKSV  |
| SEQ ID 2 | EKSQWQPDYLPDPVSDGFEEQVREL        |
| 417819   | RAKEIPDDYFVVLVGMITEEALPTYMS      |
|          | MLNRCDGIKDETGAEP                 |
|          | SAWAMWTRAWTAENRHHGD              |
|          | ENSWQPDYLPDPTSDAFEDQVKEMRERAK    |
|          | DIPDEYFVVLVGMITEEALPTYMSMLNRC    |
|          | DGDKDDTGAQPTSWATWTRAWTAENRHHGD   |
| SEQ ID 2 | LNKYLILSGRVDMRKIEKTIQYLIGSG      |
| 417819   | MDIKSENSPYLGFYTSFQERATFISHANTAK  |
|          | LAQHYGDKNLAHICGSIASDEKRRHATAYTK  |
|          | LNKYLILSGRVDMRMIEKTIQYLIGSGMD    |
|          | TKTENCPLYMGFIYTSFQERATFISHANTAK  |
|          | LAQHYGDKNLAQVCGNIAASDEKRRHATAYTK |
| SEQ ID 2 | IVEKLAEIDPDTTVIAFADMMRKKITMPA    |
| 417819   | HLMYDGSDELLFKHFTAVAQRVGVYSAL     |
|          | DYCDILEFVLVDKWNVERLTGLSDEGRKAQ   |
|          | EYVVC                            |
|          | IVEKLAEIDPDTTVIAFSDMMRKKIQPA     |
|          | HAMYDGSDDMLFKHFTAVAQQIGVYSAW     |
|          | DYCDIIDFLVDKWNVAKMTGLSGEGRKAQ    |
|          | EYVVC                            |
| SEQ ID 2 | ELGPKIRRVEEKVQGKEKKKAEHPVSF      |
| 417819   | SWIFNRELKI                       |
|          | SLAAKIRRVEEKVQGKEKK--AVLPVAF     |
|          | SWIFNRQIII                       |

Figure 2: Alignment of Acyl Carrier Proteins From English Ivy (SEQ ID NOs:4 and 6) and Coriander (gi 5669599)

|          |                                    |
|----------|------------------------------------|
| SEQ ID 4 | MASVTASSISFTSIASSLKQNGGLAKSSI      |
| SEQ ID 6 | SLSVNGKSFRLSLLSAPLFRFRVSCAAK       |
| 5669599  | PATVDKVCEIVRKQALPLILQVTGESKFAALG   |
|          | MASVTASSISFTSIASSLKQNGGLAKSSI      |
|          | SLSVNGKSFRLSLLSAPLFRFRVSCAAK       |
|          | PATVDKVCEIVRKQALPADSAVTGESKFAALG   |
|          | MAAFTASSVSFTPLSISLNQTKGFARGSV      |
|          | SIPAKAKSFGALTLRNAPLFRFRVSCAAK      |
|          | PETVEKVCEIVKKQALALPPTTEVSGDSKFAALG |
| SEQ ID 4 | ADSLDTVEIVMGLKEEFGIKRG-----        |
| SEQ ID 6 | KK                                 |
| 5669599  | ADSLDTVEIVMGLEEEFGISVEEESAQT       |
|          | ATVQDAADLIEKLVEKKE                 |
|          | ADSLDTVEIVMGLEEEFGISVEEESAQT       |
|          | ATVQDAADLIEKLCEKKE                 |